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Kenneth H. Abbott

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EXAMINER

HAILU, TADESSE

ART UNIT

PAPER NUMBER

2173

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/879,339	Applicant(s) ABBOTT ET AL.	
	Examiner Tadesse Hailu	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 72-75 and 82-202 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 82-96, 139-150, 155 and 164-202 is/are allowed.
- 6) ☒ Claim(s) 72-75, 97-138, 151-154 and 156-163 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment submitted/entered on March 23, 2006 for the above identified application number.
2. The pending claims 72-75 and 82-202 are examined herein as follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 72-75, 97-115, 117-119, 121-138, 151-154, and 156-161 are rejected under 35 U.S.C. 102(a) as being anticipated by John Bates, et al., "Middleware Support for Mobile Multimedia Applications," (1997).

With regard to claim 72:

Bates et al discloses a Middleware Support for Mobile Multimedia Applications. One of the middleware services offered is a trader. A trader is used to locate objects in an environment (see fig. 1, and section 5.2). The middleware support enables applications to follow registered mobile users as they move. Bates further discloses monitoring activities of a module related to

at least one of the state attributes such as, nearest electronic equipment to the user, location of the user, etc (see section 2.4). Bates also describes the trader receives a request from a client application. The request may include interest in receiving notification when a specified event that is related to at least one of the context attributes occurs (Bates, section 2.2). Bates also describes automatically determining an event that matches the received request (section 2.5), wherein the determining is based on the monitored module (section 2.5). Bates also describes automatically monitoring (sections 2.3, and 2.5) for complex occurrence of information related to the at least one context attributes for an indication of an occurrence of the specified event, such monitoring for example includes to automatically inform or notify the user (David) when his friend (John) enters his room (sections 1.1 and 2.2, Figs. 4, 5). Bates further describes asynchronously informing clients when events of interest occur (section 8)

With regard to claim 73:

As per "... the monitored activities of the module include supplying of values of state attributes from others, and wherein the determined event is related to availability of a value of at least one state attribute." (see Bates, sections 2.2, Figs. 2, 5 and 6).

With regard to claim 74:

As per "... the event is availability of a source for supplying values of a first state attribute." (see Bates, sections 2.2, Figs. 2, 5 and 6).

With regard to claim 75:

As per "... the state attributes represent information about a user of the computer." (see Bates, sections 2.2 and 2.3).

With regard to claim 97:

Bates discloses a method in a computer for providing information about a current state of the mobile user that is modeled with multiple state attributes, such as nearby devices to the user and location of the user (Bates, sections 2.2, 2.3, Fig. 2); the method includes automatically analyzed received information related to at least one of the multiple state attribute (e.g., location or devices or users) in order to automatically determine (i.e., after a user submits his interest) at least one type of occurrence (e.g., location of John is detected and reported to a user, Bates, Page 6) that may be of interest to at least one determined module (Bates, sections 1.1-2.4, Fig. 2). Bates further discloses after the determined of the type of occurrence, detecting an occurrence, detecting an occurrence of the determined type (Bates, page 6) For example such occurrence event includes Davis may want to be notified when John moves (condition satisfied) to his room or to another room (Bates, sections 1.1-2.4, Fig. 2). Bates further discloses notifying the determined modules of the occurrence (e.g., the location service determines and notify the user/client that, for example, John has been seen in the meeting room, Bates, page 6).

With regard to claim 98:

As per “The method of claim 97 wherein the detecting of the occurrence includes monitoring received information.” (Bates, sections 2.2 and 2.3; Fig. 2).

With regard to claim 99:

As per “The method of claim 97 wherein the detecting of the occurrence includes detecting changes in the modeling of the current state.” (Bates, sections 2.2 and 2.3; Fig. 2);

With regard to claim 100:

As per “The method of claim 97 wherein the determined type of occurrence is satisfaction of a condition related to a value of at least one of the state attributes, and wherein the detecting of the occurrence includes analyzing changes in the values of the at least one state attributes in order to determine when the condition is satisfied.” (Bates, sections 1.1-2.4, Fig. 2).

With regard to claim 101:

As per “The method of claim 97 wherein at least one of the determined modules is a source of values for at least one of the state attributes.” (Bates, sections 2.2 and 2.3; Fig. 2).

With regard to claim 102:

As per “The method of claim 97 wherein the at least one of the determined modules is a consumer of values for at least one of the state attributes.” (Bates, sections 2.4, 5.2, Fig. 2).

With regard to claim 103:

As per “The method of claim 97 wherein the determined type of occurrence is a change in a value of a determined state attribute.” (Bates, sections 2.2-2.3).

With regard to claim 104:

As per “the method of claim 97 wherein the determined type of occurrence includes a source becoming available to supply values for a determined state attribute.” (Bates, sections 2.2-2.3).

With regard to claim 105:

As per “The method of claim 97 wherein the determined type of attribute that satisfies a occurrence includes availability of a value of a determined state attribute determined criteria.” (Bates, sections 1.1-2.3).

With regard to claim 106:

As per “The method of claim 97 wherein the determined type of occurrence includes a determined source becoming available to supply state attribute values, and wherein the detecting includes determining that the determined source is currently able to supply state attribute values.” (Bates, sections 2.2 and 2.5).

With regard to claim 107:

As per “The method of claim 97 wherein the determined type of occurrence includes a determined client becoming available to receive state attribute values.” (Bates, sections 2.2 and 2.5).

With regard to claim 108:

As per “The method of claim 97 wherein the determined type of occurrence includes at least one client expressing art interest in receiving values of a determined state attribute.” (Bates, section 2.4).

With regard to claim 109:

As per “the method of claim 97 wherein the computer has access to various devices, and wherein the determined type of occurrence includes a value of one of the state attributes indicating that access to a determined device has become available.” (Bates, sections 2.2-2.3).

With regard to claim 110:

As per “The method of claim 97 wherein the determined type of occurrence includes access to a determined group of themed attributes becoming available.” (Bates, sections 2.2-2.3).

With regard to claim 111:

As per “The method of claim 97 wherein the providing of the information about the current state is performed by a characterization module, and wherein the determined type of occurrence includes a value of one of the state attributes indicating that access to determined other functionality provided by the characterization module has become available.” (Bates, sections 4.2 and 5.2-5.3, Fig. 1).

With regard to claim 112:

As per “The method of claim 111 wherein the other functionality is a determined mediator.” (Bates, sections 4.2 and 5.2-5.3, Fig. 1).

With regard to claim 113:

As per “The method of claim 97 wherein the determining of the type of occurrence includes determining a number of times that the notifying of the determined modules is to occur.” (Bates, sections 1.1-2.2 and 4.2).

With regard to claim 114:

As per “The method of claim 97 wherein the determining of the type of occurrence includes determining times during which the notifying of the determined modules is to occur.” (Bates, sections 1.1-2.2 and 4.2).

With regard to claim 115:

As per “The method of claim 97 wherein the state attributes represent information about a user of the computer.” (Bates, section 1.1).

With regard to claim 117:

As per “the method of claim 97 wherein the state attributes represent information about the computer.” (Bates, sections 1.1-2.2 and 4.2).

With regard to claim 118:

As per “The method of claim 97 wherein the state attributes represent information about a physical environment.” (Bates, Figs. 1-6).

With regard to claim 119:

As per “The method of claim 97 wherein the state attributes represent information about a cyber-environment of a user of the computer.” (Bates, section 5.3).

With regard to claim 121:

As per “The method of claim 97 wherein the notifying of a module of a detected occurrence prompts the module to present information to a user of the module.” (Bates, section 5.3 and 6.2).

With regard to claim 122:

As per “The method of claim 97 wherein the notifying of a module of a detected occurrence includes supplying information about the detected occurrence.” (Bates, section 1.3).

With regard to claim 123:

As per “the method of claim 97 wherein the determining of the type of occurrence includes determining an event whose occurrences are occurrences of the determined type.” (Bates, sections 1.1-2.2).

With regard to claim 124:

Bates discloses a computing device for providing information about a current state of the mobile user that is represented with multiple attributes, including user's location and nearby electronic devices or other facilities. In section 2.2,

Bates further describes once clients are register interest in the set of occurrences they wish to be informed of, Services (e.g., information supplier) notify (i.e., automatically) clients asynchronously if an occurrence matching the registration criteria is detected. Similarly, in section 2.5, Bates describes if an event matches any registered templates, the event system will notify (i.e., automatically) the appropriate client(s). Thus, in sections 2.2, 2.3 and 2.5,

Bates describes automatically determining at least one type of occurrence that may be of interest to the client without received any prior indication that those types of occurrence are interest as recited in the claim.

Bates further includes a Middleware service (trader), a request receiver component that is capable of receiving from a client application (module) a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected (Bates, sections 2.2, and 2.3). Bates also describes that Middleware service (trader) also includes a notifier component that is capable of, after the receiving of the request, detecting an occurrence of the specified type and notifying the module of the detected occurrence (Bates, sections 2.2, and 2.3, Fig. 1).

With regard to claim 125:

As per “the computer-readable medium of claim 124 wherein the computer-readable medium is a memory of the computing device.” (Bates, Fig. 1).

With regard to claim 126:

As per “The computer-readable medium of claim 124 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.” (Bates, section 6.3).

With regard to claim 127:

The claim is a computing device claim corresponds to claim 124, thus, is rejected under the same reasons given to the rejection of claim 124.

With regard to claim 128:

As per “the computing device of claim 127 wherein the analysis component, the detection component and the notifier component are part of an intermediary module executing in memory of the computing device.” (Bates, section 2.2).

With regard to claim 129:

As per “the computing device of claim 127 comprising multiple sources and multiple clients executing in memory of the computing device.” (Bates, sections, 5-2-5.3; Figs. 5 and 6).

With regard to claim 130:

The claim is a computing device claim corresponds to claim 124, thus, is rejected under the same reasons given to the rejection of claim 124.

With regard to claim 131:

The claim corresponds to claim 124, thus, is rejected under the same reasons given to the rejection of claim 124.

With regard to claim 132:

As per “The method of claim 131 wherein the context attributes represent information about a user of the portable computer.” (Bates, sections 1.1, 2.2, Figs. 4 and 5).

With regard to claim 133:

As per “The method of claim 131 wherein the context that is represented is a current context.” (Bates, section 1.1, Fig. 5).

With regard to claim 134:

As per “The method of claim 131 wherein at least one of the determined types of events is availability of a source for supplying values of a specified context attribute.” (Bates, sections 2.2, Figs. 2, 5 and 6).

With regard to claim 135:

As per “The method of claim 131 wherein at least one of the determined types of events is availability of a specified source for supplying values of at least one context attribute.” (Bates, sections 2.2, Figs. 2, 5 and 6).

With regard to claim 136:

As per “The method of claim 131 wherein receiving of the notifications by the modules prompts the modules to present information to users.” (Bates, section 2.24).

With regard to claim 137:

Independent claim 137 corresponds generally to independent claim 131 and recites similar features in storage medium form, and therefore is rejected under the same rationale.

With regard to claim 138:

The claim corresponds to claim 72, thus, is rejected under the same reasons given to the rejection of claim 72:

With regard to claims 151, 157, and 158:

The remaining independent claims, while not necessary identical in scope, contain limitations similar to independent claim 124 and therefore are rejected under the same rationale.

With regard to claim 152:

As per “the detecting of the occurrence of the determined type is based at least in part on the received information.” (Bates, sections 2.2 and 2.3; Fig. 2).

With regard to claim 153:

As per “the detecting of the occurrence of the determined type is based at least in part on additional information received for one or more values of state attributes.” (Bates, sections 2.2, 2.3).

With regard to claim 154:

As per “the additional information for each of the one or more values is metadata for the value.” (Bates, section 2.2).

With regard to claim 156:

As per “the additional information for each of the one or more values includes information related to one or more times at which the value is accurate.” (Bates, section 2.2).

With regard to claim 159:

As per “the detecting of the occurrence of the determined type is based at least in part on the generated modeled values of the other state attributes.” (Bates, sections 1.3, and 2.2).

With regard to claim 160:

As per “the detecting of the occurrence of the determined type is based at least in part on generated modeled values of state attributes.” (Bates, sections 1.3, and 2.3).

With regard to claim 161:

As per “the other state attributes at the higher level of abstraction model a physical activity of a user of the computing system.” (Bates, sections 1.2, and 1.3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 116, 120, 162, and 163 are rejected under 35 U.S.C. 103(a) as being unpatentable over John Bates, et al., “Middleware Support for Mobile Multimedia Applications,” (1997) in view of Schmidt, et al., “There is more to context than location,” (November 1998).

While Bates discloses information reflecting the physical location of a target user and a nearest electronic device to a target user, Bates does not show information reflecting a modeled mental state of the user, an

emotional state of a user, a cognitive load of a user and the state attributes representing current predictions about a future state.

However, Schmidt et al discloses a plurality of sensory devices attached to a computer including, among others, a sensor to reflect the mental state of the user (Fig. 1, section 3.1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate Schmidt's sensory devices with Bates because incorporating a plurality of sensory devices will be advantageous for a better understanding, modeling or representing of the user of the device or the device.

Allowable Subject Matter

5. Claims 82-96, and 139-150 and 155, 164-193, and 194-202 are allowed:

The following is an examiner's statement of reasons for allowance:

These claims, 82-96, and 139-150 recite a method in a computing environment for providing information about a current state of a user of a computer. While the prior art of records recite a method in a computing environment for providing information about state of a computer user in and the user's environment. But the prior art of records does not explicitly describe the claimed combination steps, component modules and the combined functional steps performed by these component modules as claimed. Thus, the prior art of records does not anticipate or render the above claims. Also, as given reason in the previous Office

action, claim 155 is also allowed. Independent claims 149, 150 are also allowed. Since claims 194 and 198 recite substantially similar limitation with 155, these claims are also allowed.

Response to Arguments

6. Applicant's arguments filed on March 23, 2006 have been fully considered but they are not persuasive. The Examiner has carefully reviewed the applicant's arguments and respectfully asserts that the current claims are anticipated and/or rendered by the prior art of records.

The Applicant argues that each of the pending claims as rejected includes features and provides functionality not disclosed by the references (Bates, et al and Schmidt, et al). The applicant argues neither Bates nor Schmidt appears to include any teaching or suggestion to automatically determine events that may be of interest to an external entity, such as based on monitoring relevant activities or receiving information to assist in that automatic determination." In contrast to the applicant's argument Bates describes a mechanism for efficient composite event monitoring system, wherein a network of detectors allows the location of the user to be pinpointed. The location service collects badge events (i.e. automatically) and then passes them the event server library using the operation signal. If an event matches any registered templates, the event system will notify (i.e. automatically) the appropriate client (s) (see section 2.5). Furthermore, Bates teaches once Clients register interest in the set of occurrences they wish to be informed of, services

(e.g., location services) notify (automatically) clients asynchronously if an occurrence matching the registration criteria is detected. For example, if an event matches any registered templates, the event system will notify (i.e., automatically) the appropriate client(s).

The Applicant further states Bates appears to describe a system in which a client application must explicitly register a request to receive notification before any such notification will be provided to the client application. The applicant further argues Thus, not only does Bates not teach or suggest that claimed techniques for automatically determining events and/or occurrences of interest, Bates teaches away from such a technique by emphasizing that manual client registration for specific events is critical aspect that enables the Bates system.

The Examiner disagrees because in order to determine events and/or occurrences of interest of the system clients, the system has to have registered clients with interest in receiving values for an attributes. Once the client is register, the system will be able to determine events and/or occurrences of interest that satisfy these register client's interests or requests automatically. In addition, Clients register to receive values for an attribute (e.g. location), similarly, the information supplier registers to supply values for the attributes. Thus, registration is a must not only for exchanging information between the client and server but also as a security requirement. Thus, Bates does not teach away by

emphasizing a manual client registration for specific events.

The applicants further states and argues that the Bates system may be able to detect and provide a notification when a particular user is in a particular location based on a client application's prior explicit request for that information, but fails to provide any capabilities to automatically determine that the client application might be interested in knowing that information about that location of that user and to automatically providing such notifications to the client application without having received such an explicit request for the notifications. In contrast to the applicant's argument, once the client application registers the request to the system (or location service), the location service automatically provides to the client application without having to re-register request for the notification. For example, the system automatically provides information to the request whenever and wherever John is seen to the "report wherever John seen" request.

The applicant also argues and requests that the Examiner to indicate with specificity how the manual registration of events of interest in Bates can teach or suggest the cited claim language of , for example, claim 124 indicating that " the determining of the at least one type of occurrence that may be of interest [is] performed automatically without having received any prior indications that those types of occurrences of interest". The Examiner disagrees because the applicant misread Bates.

Bates describes that clients register to receive values for an attribute (e.g. location), similarly, the information supplier (server) registers to supply values for the attributes. This registration (manual) has nothing to do with automatically detecting or identifying , such as monitoring activities. For example, similar to Bates, as disclosed in the present application, each executing context server registers with the characterization module by calling a RegisterContextServer function and supplying (manually) parameters to identify itself (Application, page 17, lines 17-30, page 18, lines 1-30, Figs. 4 and 5). Similarly, context client registers to receive values (Application, page 19, lines 1-9, Fig. 6). This section will clarify the Applicant's misreading of Bates. Secondly, as requested by the Applicant, the section teaching an automatic detecting or identifying events of interest for clients is shown in section 2.2 and 2.5. For example, in section 2.2, once clients are register interest in the set of occurrences they wish to be informed of, Services (e.g., information supplier) notify (i.e., automatically) clients asynchronously if an occurrence matching the registration criteria is detected. Similar in section 2.5, Bates describes if an event matches any registered templates, the event system will notify (i.e., automatically) the appropriate client(s).

Having fully addressed the applicant's arguments, the rejection still stands.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and Figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Art Unit: 2173

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Tadesse Hailu, whose telephone number is (571) 272-4051. The Examiner can normally be reached on M-F from 10:30 – 7:00 ET. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kincaid, Kristine, can be reached at (571) 272-4063 Art Unit 2173 and 2174.

10. An inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Examiner Tadesse Hailu
Art Unit 2173 – Operator Interface
6/8/06


TADESSE HAILU
Patent Examiner